Claims

1. Method for producing a simulation program by making available basic program operations and making available process parameters of a real process

characterized by

automatically linking the basic program operations to the process parameters for initializing the simulation program.

2. Method according to Claim 1 wherein automatic linking is carried out by a process control system which controls or regulates the real process.

3. Method according to Claim 1 or 2 wherein the process parameters are made available by making pre-defined data packets available.

4. Method according to Claim 3 wherein the data packets are parameter triples, in particular in each case one parameter for a type of material, a type of container, and an amount of material.

5. Method according to one of the Claims 1 to 4 wherein the process parameters are obtained from a production recipe of the real process.

6. Method according to one of the Claims 1 to 5 wherein the basic program operations are assembled into the simulation program on the basis of one or more semantic programs, semantic periphery assignments and/or process control engineering documents of the control of the real process.

7. Method for simulating a real process using the process steps according to one of the Claims 1 to 5 and according to the further step of controlling the simulation process by means of a process control system of the real process.

8. Method for maintaining a system by

executing a real process in the system,

executing a simulation process according to Claim 7 synchronously with the real process, with the simulation process simulating at least a part of the real process,

comparing the simulation process with the real process or the part thereof and obtaining a comparison result from this, and

deriving maintenance measures from the comparison result.

9. Device for simulating a system with

a storage facility for making available basic program operations and for a simulation process and

a control device for simulating a real process on the basis of the basic program operations

c h a r a c t e r i z e d b y

a read-in device for reading in process parameters of the real process wherein, by means of the control device, the basic program operations for a simulation process can be automatically linked to the process parameters for initializing the simulation process.

10. Device according to Claim 9 wherein the control device is integrated in a process control system which controls or regulates the real process.

11. Device according to Claim 9 or 10 wherein the process parameters are pre-defined data packets.

12. Device according to Claim 11 wherein the data packets are parameter triples, in particular in each case one parameter for a type of material, a type of container, and an amount of material.

13. Device according to one of the Claims 9 to 12 wherein the process parameters can be read in by the read-in device from a production recipe storage unit of the real process.

14. Device according to one of the Claims 9 to 13 wherein one or more semantic programs, semantic periphery assignments and/or process control engineering documents of a real process can be read in by the read-in device and used by the control device for assembling the basic program operations.

15. Device for maintaining a system in which a real process can be executed, with a simulation device according to one of the Claims 9 to 14 for simulating at least a part of the real process by means of a simulation process wherein the simulation process can be executed synchronously with the real process.